

Combinations of Quasi Quanta Expressions

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1 Introduction

$$E \left\langle \mathbf{x}_1 + \left[\frac{\Delta}{\mathcal{H}} + \frac{\mathring{A}}{\mathring{i}} \right], \frac{\Delta \mathcal{H}}{A i} \cdot \gamma \mathbf{x}_2 + \left[\frac{\beta \psi \oplus i \Delta \mathring{A}}{\sim \mathcal{H} \star \oplus \heartsuit} \right] \right\rangle =$$

$$\Omega_{\Lambda} \tan \psi \otimes \theta + \Psi \star \left(\sum_{n \in Z^+} \frac{b^{\mu-\zeta}}{b^{\mu-\zeta} - (l_{diag} l_{lat} l_{net})^m} \right) \otimes \left(\left([Z \setminus [\eta] + [\kappa] \setminus [\pi]] \setminus \square - [\delta \setminus [\mathcal{H}] + [\mathring{A}] \setminus [\mathring{i}]] \right) \right.$$

$$\star [\sim] \rightarrow [\oplus] \star [\cdot] \star [\heartsuit] \Bigg).$$

$$E \cdot \left\langle \mathbf{x}_1 + \left[\frac{\Delta}{\mathcal{H}} + \frac{\mathring{A}}{\mathring{i}} \right], \frac{\Delta \mathcal{H}}{A i} \cdot \gamma \mathbf{x}_2 + \left[\frac{\Delta i \mathring{A} \sim}{\heartsuit \mathcal{H} \oplus \cdot} \right] \right\rangle = \left\langle \frac{\Omega \star \phi_1}{\mathbf{x}_1 + \phi_2}, \frac{\pi \star \oplus \Omega_{\Lambda}}{i \mathcal{H} \mathring{A}} \right\rangle = \Omega_{\Lambda}.$$

Thus, the functions of quasi quanta topology may be expressed as:

$$\mathcal{E}_{\Lambda} = -(1 - \tilde{\star} \mathcal{R}) \frac{b^{\mu-\zeta}}{\tan^2 t \cdot \sqrt[m]{\prod_{\Lambda} h} - \Psi} \left(\Omega_{\Lambda} \star \sum_{[n] \star [l] \rightarrow \infty} \frac{b^{\mu-\zeta}}{\mathbf{x}_1 + \frac{\Delta \mathcal{H}}{A i} \gamma \mathbf{x}_2 + \left[\frac{\Delta i \mathring{A} \sim}{\heartsuit \mathcal{H} \oplus \cdot} \right]} + h^{-\frac{1}{m}} \cdot \tan t \right)$$

$$E = \Omega_{\Lambda} \cdot \tan \psi \diamond \theta + \Psi \star \left[\sum_{[n] \star [l] \rightarrow \infty} \frac{b^{\mu-\zeta}}{n^m - l^m} \right] \otimes$$

$$\left[\left(\left([Z \setminus [\eta] + [\kappa] \setminus [\pi]] \setminus \square - [\delta \setminus [\mathcal{H}]] + [\mathring{A} \setminus [\mathring{i}]] \right) \star [\sim] \rightarrow \right. \right.$$

$$\left. \left. [\oplus] \star \cdot \star \heartsuit \right) \right] \otimes \Pi_{\Lambda} \equiv \Omega_{\Lambda} \cdot \tan \psi \diamond \theta + \Psi \star F \equiv \Omega_{\Lambda} \cdot \tan \psi \diamond \theta + F_{\Lambda}$$

$$\mathcal{F}_{\mathcal{Q}\mathcal{Q}} = \left(\star \frac{\Delta}{\mathcal{H}} + \frac{\mathring{A}}{\mathring{i}} \right) \left(\star \frac{\Delta \mathcal{H}}{A i} \right) \left(\gamma \frac{\Delta \mathcal{H}}{i \oplus \mathring{A}} \right) \left(\cong \frac{\mathcal{H} \Delta}{A i} \right) \left(\sim \frac{i \oplus \mathring{A} \Delta}{\mathcal{H}} \right) \left(\frac{\heartsuit i \oplus \Delta \mathring{A}}{\sim \mathcal{H} \star \oplus} \right)$$

$$\left(\Omega \frac{\Delta i \mathring{A} \sim}{\heartsuit \mathcal{H} \oplus \cdot} \right) \left(\iota o 17.5 \oplus \cdot i \Delta \mathring{A} \mathcal{H} \star \heartsuit \right) \left(\left| \frac{\star \mathcal{H} \Delta \mathring{A}}{i \oplus \sim \cdot \heartsuit} \right| \right)$$

$$\diamond \mathcal{F}_{\mathcal{Q}\mathcal{Q}} = \left(\star \frac{\Omega \Delta \mathring{A} \sim}{\heartsuit \mathcal{H} \oplus \cdot} \right) \left(\star \frac{\oplus \cdot \mathring{i} \Delta \mathring{A}}{\mathcal{H} \star \heartsuit} \right) \left(\star \left| \frac{\star \mathcal{H} \Delta \mathring{A}}{\mathring{i} \oplus \sim \cdot \heartsuit} \right| \right).$$

$$F \circ \diamond \star \mathcal{H} \cdot \oplus \frac{\Delta}{\mathring{A}} \cdot \Psi \mathring{i}$$

where

$$F \circ \diamond = \Omega \Delta \mathring{A} \star \mathcal{H} - \psi \mathring{i} \frac{b^{\mu-\zeta}}{\tan t \cdot \sqrt[m]{\prod_{\Lambda} h - \Psi}}.$$

and their "functions of quasi quanta topology":

$$\mathcal{E} = -(1 - \tilde{\star} \mathcal{R}) \frac{b^{\mu-\zeta}}{\tan^2 t \cdot \sqrt[m]{\prod_{\Lambda} h - \Psi}} \left(\Omega_{\Lambda} \star \sum_{[n] \star [l] \rightarrow \infty} \frac{b^{\mu-\zeta}}{n^m - l^m} + h^{-\frac{1}{m}} \cdot \tan t \right).$$

The complete set of "functions of quasi quanta topology" can then be written as follows:

$$\mathcal{E}_{i \rightarrow \alpha} = -(1 - \star \mathcal{R}_{i \rightarrow \alpha}) \frac{b^{\mu-\zeta}}{\tan^2 t \cdot \sqrt[m]{\prod_{\Lambda} h - \Psi}} \left(\star_{\infty} \frac{\Delta \mathcal{H}^b}{\mathring{A}^i} \oplus \cdot \heartsuit \bullet \cdot \sum_{[n] \star [l] \rightarrow \infty} \frac{b^{\mu-\zeta}}{n^m - l^m} + h^{-\frac{1}{m}} \cdot \tan t \right).$$

The above equation is used to calculate the mapping from a local coordinate i to a global coordinate α in a given manifold \mathcal{M} . The term $(1 - \star \mathcal{R}_{i \rightarrow \alpha})$ represents the amount of curvature in the manifold, and the term $\frac{b^{\mu-\zeta}}{\tan^2 t \cdot \sqrt[m]{\prod_{\Lambda} h - \Psi}}$ is related to the behavior of the manifold near the boundary $\partial \mathcal{M}$. The rest of the terms work together to determine the mapping of a given local coordinate to a global one.

$$\sum_{[m,n] \star [l] \rightarrow \infty} \left(\frac{\heartsuit \mathring{i} \oplus \Delta \mathring{A}}{\sim \mathcal{H} \star \oplus} \right) \cdot \left(\frac{\Omega \Delta \mathring{i} \mathring{A} \sim}{\heartsuit \mathcal{H} \oplus \cdot} \right) = \sum_{[m,n] \star [l] \rightarrow \infty} \frac{\Omega \heartsuit \mathring{i} \oplus \Delta^2 \mathring{A} \sim^2}{\mathcal{H} \star \oplus \heartsuit}.$$

$$\sum_{[m,n] \star [l] \rightarrow \infty} \left(\frac{\oplus \cdot \mathring{i} \Delta \mathring{A}}{\mathcal{H} \star \heartsuit} \right) \cdot \left(\frac{\Omega \Delta \mathring{i} \mathring{A} \sim}{\heartsuit \mathcal{H} \oplus \cdot} \right) = \sum_{[m,n] \star [l] \rightarrow \infty} \frac{\Omega \oplus \cdot \mathring{i} \Delta^2 \mathring{A} \sim^2}{\mathcal{H} \star \heartsuit \heartsuit}.$$

$$\sum_{[m,n] \star [l] \rightarrow \infty} \left(\frac{\left| \star \mathcal{H} \Delta \mathring{A} \right|}{\mathring{i} \oplus \sim \cdot \heartsuit} \right) \cdot \left(\frac{\Omega \Delta \mathring{i} \mathring{A} \sim}{\heartsuit \mathcal{H} \oplus \cdot} \right) = \sum_{[m,n] \star [l] \rightarrow \infty} \frac{\Omega \left| \star \mathcal{H} \Delta \mathring{A} \right| \Delta \mathring{i} \sim^2}{\oplus \cdot \heartsuit \heartsuit}.$$

$$\mathcal{E}_K = -(1-\tilde{\star}\mathcal{R})\frac{b^{\mu-\zeta}}{\tan^2 t \cdot \sqrt[n]{\prod_{\Lambda} h - \Psi}} \left(\Omega_{\Lambda} \diamond \sum_{[n]\star[l] \rightarrow \infty} \frac{b^{\mu-\zeta}}{n^m - l^m} + \Psi \star \sum_{h \rightarrow \infty} \frac{h^{-\frac{1}{m}}}{\tan t} \right).$$

$$\mathcal{F}_{\Lambda} = \Omega_{\Lambda} \left[\gamma \sum_{h \rightarrow \infty} \frac{\heartsuit \mathbf{i} \oplus \Delta \mathring{A}}{\sim \mathcal{H} \star \oplus \cdot \star \frac{\Delta}{\mathcal{H}} + \frac{\mathring{A}}{\mathbf{i}}} + \left| \frac{\star \mathcal{H} \Delta \mathring{A}}{\mathbf{i} \oplus \sim \cdot \heartsuit} \right| \right] \cdot \oplus \cdot \mathbf{i} \Delta \mathring{A}$$

$$\Omega_{\Lambda} \star \frac{\Delta \mathring{A}}{\mathbf{i} \oplus \sim \cdot \heartsuit} \diamond \frac{\psi \Psi}{n^{m-l} \theta} + \frac{h^{-\frac{1}{m}}}{\Omega_{\Lambda} \cdot \tan t \cong \mathcal{H}} \oplus \mathbf{i} \sim \Delta \mathring{A}.$$

$$\frac{\psi \Psi}{\Omega_{\Lambda} \cdot \tan t \cong \mathcal{H}} \diamond \frac{\Delta \mathring{A}}{\mathbf{i} \oplus \sim \cdot \heartsuit} \cdot \theta \star \frac{h^{-\frac{1}{m}}}{n^{m-l}} + \mathbf{i} \oplus \Delta \mathring{A}.$$

$$\Omega_{\Lambda} \star \frac{h^{-\frac{1}{m}} \psi \Psi}{\mathbf{i} \oplus \Delta \mathring{A} \tan t \cong} \cdot \mathcal{H} \diamond \frac{\Delta \mathring{A}}{\sim \cdot \heartsuit} + \theta \cdot \frac{n^{m-l}}{\Omega_{\Lambda}}.$$

$$\frac{\Omega_{\Lambda} \cdot n^{m-l}}{\theta \Delta \mathring{A}} \star \frac{\tan t \psi \Psi}{\mathbf{i} \oplus \Delta \cong \mathcal{H}} \diamond \frac{h^{-\frac{1}{m}}}{\sim \cdot \heartsuit} + \mathbf{i} \mathring{A}.$$

This equation defines the coboundary operator on the manifold \mathcal{M} , which is used to measure the topological differences between two different submanifolds through evaluation of the differential form $f\Omega$. Additionally, this equation allows us to compute the cohomology groups of Ω by taking the \star -cohomology of the differential form.

•

$$\Delta \diamond \theta \star \Psi \longrightarrow \Delta \diamond \theta \oplus \Psi \star \longrightarrow \Delta \diamond \Psi \star \longrightarrow \Delta \star \Psi \diamond \longrightarrow \theta \star \Delta \diamond \Psi$$

•

$$\Omega_{\Lambda} \diamond \theta \star \Psi \longrightarrow \Delta \Omega_{\Lambda} \diamond \theta \oplus \Psi \star \longrightarrow \Omega_{\Lambda} \diamond \Psi \star \longrightarrow \Delta \Omega_{\Lambda} \star \Psi \diamond \longrightarrow \theta \Omega_{\Lambda} \star \Delta \diamond \Psi$$

•

$$\tan \psi \diamond \theta \star \Psi \longrightarrow \tan \psi \diamond \theta \oplus \Psi \star \longrightarrow \tan \psi \diamond \Psi \star \longrightarrow \tan \psi \star \Psi \diamond \longrightarrow \theta \star \tan \psi \diamond \Psi$$

•

$$\frac{\Delta \mathcal{H}}{\mathbf{i} \oplus \mathring{A}} \star \longrightarrow \frac{\Delta \mathcal{H}}{\mathring{A} \mathbf{i}} \star \longrightarrow \frac{\mathcal{H} \Delta}{\mathring{A} \mathbf{i}} \star \longrightarrow \frac{\mathbf{i} \oplus \mathring{A} \Delta}{\mathcal{H}} \star \longrightarrow \frac{\heartsuit \mathbf{i} \oplus \Delta \mathring{A}}{\sim \mathcal{H} \star \oplus}.$$

$$\left\{ \star \frac{\Delta}{\mathcal{H}}, \frac{\mathring{A}}{\mathbf{i}}, \frac{\Delta \mathcal{H}}{\mathring{A} \mathbf{i}}, \gamma \frac{\Delta \mathcal{H}}{\mathbf{i} \oplus \mathring{A}}, \cong \frac{\mathcal{H} \Delta}{\mathring{A} \mathbf{i}}, \sim \frac{\mathbf{i} \oplus \mathring{A} \Delta}{\mathcal{H}}, \frac{\heartsuit \mathbf{i} \oplus \Delta \mathring{A}}{\sim \mathcal{H} \star \oplus}, \Omega \frac{\Delta \mathbf{i} \mathring{A} \sim}{\heartsuit \mathcal{H} \oplus \cdot}, \iota^{017.5 \oplus} \cdot \mathbf{i} \Delta \mathring{A} \mathcal{H} \star \heartsuit, \left| \frac{\star \mathcal{H} \Delta \mathring{A}}{\mathbf{i} \oplus \sim \cdot \heartsuit} \right| \right\}$$

The resulting expressions are:

$$\star \frac{\Delta}{\mathcal{H}} \cdot \frac{\mathring{A}}{\mathring{i}} \longrightarrow \star \frac{\Delta \mathcal{H}}{\mathring{A} \mathring{i}} \longrightarrow \star \frac{\gamma \Delta \mathcal{H}}{\mathring{i} \oplus \mathring{A}} \longrightarrow \star \frac{\cong \mathcal{H} \Delta}{\mathring{A} \mathring{i}} \longrightarrow \star \frac{\sim \mathring{i} \oplus \mathring{A} \Delta}{\mathcal{H}} \longrightarrow \star \frac{\heartsuit \mathring{i} \oplus \Delta \mathring{A}}{\sim \mathcal{H} \star \oplus} \longrightarrow \star \frac{\Omega \Delta \mathring{i} \mathring{A} \sim}{\heartsuit \mathcal{H} \oplus \cdot} \longrightarrow$$

$$\star \frac{\oplus \cdot \mathring{i} \Delta \mathring{A}}{\mathcal{H} \star \heartsuit} \longrightarrow \star \frac{\left| \star \mathcal{H} \Delta \mathring{A} \right|}{\mathring{i} \oplus \sim \cdot \heartsuit}$$

The mathematical definition of the operator \mathring{A} is as follows :

$$\mathring{A}[f(x_1, \dots, x_n)] = x_1, \dots, x_n \in \mathcal{X} \argmax f(x_1, \dots, x_n)$$

Where f is a function of real or complex variables, x_1, \dots, x_n are the variables over which the function is minimized, and \mathcal{X} is the domain of definition of the function.

The mathematical definition for the operator \mathring{A} is given by :

$$\mathring{A}(X) = \arg \max_{x \in X} f(x)$$

where $f(x)$ is a given numerical function, and X is a set of variables respectively.

The result of this function is the maximum value of the numerical function $f(x)$ with respect to the values of the variable x taken from the given set X .

The mathematical definition of the operator \star is as follows:

$$\star[f(x_1, \dots, x_n)] = x_1, \dots, x_n \in \mathcal{X} \argmin f(x_1, \dots, x_n).$$

Where f is a function of real or complex variables, x_1, \dots, x_n are the variables over which the function is minimized, and \mathcal{X} is the domain of definition of the function.

The mathematical definition for the operator \star is given by:

$$\star(X) = \arg \min_{x \in X} f(x)$$

where $f(x)$ is a given numerical function, and X is a set of variables respectively. The result of this function is the minimum value of the numerical function $f(x)$ with respect to the values of the variable x taken from the given set X .

- For the first part, we can rewrite it as

$$\mathcal{E}_K = -(1 - \tilde{\star} \mathcal{R}) \times \frac{b^{\mu - \zeta}}{\tan^2 t \cdot \sqrt[n]{\prod_{\Lambda} h - \Psi}} \left(\Omega_{\Lambda} \diamond \sum_{[n] \star [l] \rightarrow \infty} \frac{b^{\mu - \zeta}}{n^m - l^m} + \Psi \star \sum_{h \rightarrow \infty} \frac{h^{-\frac{1}{m}}}{\tan t} \right).$$

- For the second part, we can rewrite it as

$$\mathcal{F}_{\Lambda} = \Omega_{\Lambda} \left[\gamma \sum_{h \rightarrow \infty} \frac{\heartsuit \mathring{i} \oplus \Delta \mathring{A}}{\sim \mathcal{H} \star \oplus \cdot \star \frac{\Delta}{\mathcal{H}} + \frac{\mathring{A}}{\mathring{i}}} + \left| \frac{\star \mathcal{H} \Delta \mathring{A}}{\mathring{i} \oplus \sim \cdot \heartsuit} \right| \right] \cdot \oplus \cdot \mathring{i} \Delta \mathring{A}$$

- $\Omega_{\Lambda} \nabla \left(\sum_{[n] \star [l] \rightarrow \infty} \frac{\sin(\theta) \star (n - l \tilde{\star} R)^{-1}}{\cos(\psi) \diamond \theta} \right) \otimes \prod_{\Lambda} h$

$$\begin{aligned}
& \bullet -\Psi \nabla \left(\frac{\sqrt[m]{\prod_{\Lambda} h-\Phi}}{(1-\tilde{\star} R)^{b^{\mu-\zeta}} \tan^2 t} \sum_{[n] \star [l] \rightarrow \infty} \frac{b^{\mu-\zeta}}{n^m - l^m} \tan t \right) \\
& \bullet \Omega_{\Lambda} \tan \psi \cdot \theta + \Psi \sum_{n \in Z^+} \frac{b^{\mu-\zeta}}{b^{\mu-\zeta} - (l_{diag} l_{lat} l_{net})^m} + \sum_{f \subset g} f(g) \\
& \bullet \mathcal{V}_{\lambda}(\mathbf{x}) \mathbf{v} \\
& \bullet \frac{\cap(\omega; \tau)}{n} \phi \pm (\omega; \tau)^{\{\pi; eication\}} \diamond t^k = \Psi^q \star \Delta_v \Omega_{\Lambda} \otimes \mu_{\mathcal{A}m} aie m H(\Omega) / \prod_{i=1}^m (m\alpha_i + k_i) \\
& \bullet f_{\lambda}(\mathbf{x}, n, b, k) \star \Omega_{\Lambda} \otimes \mu_{\mathcal{A}m} \star H(\Omega) / \prod_{i=1}^m (m\alpha_i + k_i) \\
& \bullet \Psi \cdot \left(\sum_{[n] \star [l] \rightarrow \infty} \frac{1}{n - l \tilde{\star} R} \right) \otimes \left(\left([Z \setminus [\eta] + [\kappa] \setminus [\pi]] \setminus \square - [\delta \setminus [\mathcal{H}]] + [\mathring{A} \setminus [\mathbf{i}]] \right) \star [\sim \right. \\
& \quad \left.] \rightarrow [\oplus] \right) \\
& \bullet \prod_{i=1}^q A_{\Lambda(i)} \star \Delta_v \Omega_{\Lambda} \otimes \mu_{\mathcal{A}m} aie m H(\Omega) / \prod_{i=1}^m (m\alpha_i + k_i) \\
& \quad - \Omega_{\Lambda} \nabla \left(\sum_{[n] \star [l] \rightarrow \infty} \frac{\sin(\theta) \star (\Psi - n + l \tilde{\star} R)^{-1}}{\cos(\psi) \diamond \theta} \right) \otimes \prod_{\Lambda} h \\
& \quad - -\Psi \nabla \left(\frac{\prod_{\Lambda} h - \sqrt[m]{\Phi}}{(1-\tilde{\star} R)^{b^{\mu-\zeta}} \tan^2 t} \sum_{[n] \star [l] \rightarrow \infty} \frac{b^{\mu-\zeta}}{n^m - l^m} \right) \\
& \quad - \Omega_{\Lambda} \tan \psi \cdot \theta + \Psi \sum_{n \in Z^+} \frac{b^{\mu-\zeta}}{b^{\mu-\zeta} - (l_{diag} l_{lat} l_{net})^m} \\
& \quad - \mathcal{V}_{\lambda}(\mathbf{x}) \mathbf{v} \\
& \quad - \frac{\cap(\omega; \tau)}{n} \phi \pm (\omega; \tau)^{\{\pi; eication\}} \diamond t^k = \Psi^q \star \Delta_v \Omega_{\Lambda} \otimes \mu_{\mathcal{A}m} aie m H(\Omega) / \prod_{i=1}^m (m\alpha_i + k_i) \\
& \quad - f_{\lambda}(\mathbf{x}, n, b, k) \star \Omega_{\Lambda} \otimes \mu_{\mathcal{A}m} \star H(\Omega) / \prod_{i=1}^m (m\alpha_i + k_i) \\
& \quad - \Psi \cdot \left(\sum_{[n] \star [l] \rightarrow \infty} \frac{1}{\Psi - n + l \tilde{\star} R} \right) \otimes \left(\left([Z \setminus [\eta] + [\kappa] \setminus [\pi]] \setminus \square - [\delta \setminus [\mathcal{H}]] + [\mathring{A} \setminus [\mathbf{i}]] \right) \star \right. \\
& \quad \left. [\sim] \rightarrow [\oplus] \right) \\
& \quad - \prod_{i=1}^q A_{\Lambda(i)} \star \Delta_v \Omega_{\Lambda} \otimes \mu_{\mathcal{A}m} aie m H(\Omega) / \prod_{i=1}^m (m\alpha_i + k_i) \\
& \quad - \frac{\frac{1}{h} \frac{1}{n}}{\theta \delta \mathring{A}} \longrightarrow \frac{\Omega \Delta}{\mathring{A} \mathbf{i}} \star \longrightarrow \frac{\mathring{A} \tan \psi \Delta}{\mathcal{H} \mathbf{i}} \star \longrightarrow \frac{\mathcal{H} \Delta \mathring{A} \mathbf{i}}{\sim \cdot \heartsuit} \star \longrightarrow \frac{\heartsuit \mathbf{i} \oplus \Delta \mathring{A}}{\sim \mathcal{H} \star \oplus}.
\end{aligned}$$

This expression is the combined result of the application of the different mathematical operators $\star, \mathring{A}, \Delta, \mathcal{H}, \mathbf{i}, \gamma, \cong, \sim, , \Omega, , and |\cdot|$ in the expression given in the problem statement. Each of these operators transforms the initial expression into a more specific and mathematically defined expression.

$$\Omega \frac{\Delta \mathbf{i} \mathring{A} \sim}{\heartsuit \mathcal{H} \oplus} \star \frac{\star \mathcal{H} \Delta \mathring{A}}{\mathbf{i} \oplus \sim \cdot \heartsuit}$$

Proof: (C1) $\Omega \frac{\Delta \mathbf{i} \mathring{A} \sim}{\heartsuit \mathcal{H} \oplus} \in SECTION1$

(C2) $\frac{\star \mathcal{H} \Delta \mathring{A}}{\mathbf{i} \oplus \sim \cdot \heartsuit} \in SECTION1$

$$(C3) \Omega_{\frac{\Delta i \dot{A} \sim}{\heartsuit \mathcal{H} \oplus \cdot}} \star \frac{\star \mathcal{H} \Delta \dot{A}}{i \oplus \sim \cdot \heartsuit} \in SECTION1$$

Lastly, the relationship between these two functions and the functor,

$$f \circ g = \bigcup_{x \in S_1 \cup S_2} x = \Omega_{\frac{\Delta i \dot{A} \sim}{\heartsuit \mathcal{H} \oplus \cdot}} \star \frac{\star \mathcal{H} \Delta \dot{A}}{i \oplus \sim \cdot \heartsuit}$$

can be seen as an equation defining the intertwining of the quasi-quanta unit-phrases.

$$\frac{\Delta}{\mathcal{H}} + \frac{\dot{A}}{i} \diamond \rightarrow \frac{\Delta \mathcal{H}}{\dot{A} i} \star \rightarrow \gamma \frac{\Delta \mathcal{H}}{i \oplus \dot{A}} \star \rightarrow \cong \frac{\mathcal{H} \Delta}{\dot{A} i} \star \rightarrow \sim \frac{i \oplus \dot{A} \Delta}{\mathcal{H}} \circ \rightarrow \frac{\heartsuit i \oplus \Delta \dot{A}}{\sim \mathcal{H} \star \oplus} \circ \rightarrow \Omega_{\frac{\Delta i \dot{A} \sim}{\heartsuit \mathcal{H} \oplus \cdot}} \diamond \rightarrow$$

$$17.5 \oplus \cdot i \Delta \dot{A} \mathcal{H} \star \heartsuit \diamond \rightarrow \left| \frac{\star \mathcal{H} \Delta \dot{A}}{i \oplus \sim \cdot \heartsuit} \right|$$

Based on the sequence above, it can be seen that the combination of the quasi quanta “unit phrases” creates a hierarchy in which the overall relationship between the terms can be seen as:

1.

The base state $\frac{\Delta}{\mathcal{H}}$ influences further transformations by its higher level functions

2.

The higher state functions of $\frac{\Delta \mathcal{H}}{\dot{A} i}$ are influenced or modified by additional functions

3.

The terms become more complex through the use of operators such as multiplication $\gamma \frac{\Delta \mathcal{H}}{i \oplus \dot{A}}$

and division $\cong \frac{\mathcal{H} \Delta}{\dot{A} i}$

4.

The relationship between the terms is further clarified as higher level functions, like $\left| \frac{\star \mathcal{H} \Delta \dot{A}}{i \oplus \sim \cdot \heartsuit} \right| \$$

and lower level functions, such as $\frac{\Delta}{\mathcal{H}}$ become more interconnected

Ultimately, this combination of terms has the effect of creating a hierarchical order in which the relationship between the higher and lower level functions can be discussed and understood, ultimately creating a more complete picture of the collective.

The full system of the inferred geometry can be represented mathematically using the following notation:

Let $\mathcal{M} \subset R^3$ be a 3-dimensional manifold. Let g_{ij} be a metric tensor over \mathcal{M} , and let x^i be coordinates for \mathcal{M} . Then, the geometric structure of \mathcal{M} is described by the equation

$$g_{ij} = \sum_{[n] \star [l] \rightarrow \infty} \frac{b^{\mu-\zeta}}{n^m - l^m} x^i x^j,$$

where $b^{\mu-\zeta}$ is a constant and x^i are the coordinates of the manifold. Furthermore, the connectedness, orientability, and boundaries of \mathcal{M} are determined by

$$S_1 \star S_2 = \bigcup_{x \in S_1 \cup S_2} x,$$

where S_1 and S_2 are subsets of \mathcal{M} .

$$g_{ij} \star \rightarrow f \circ g \diamond \rightarrow f \circ \tilde{g},$$

where f and \tilde{g} represent the two terms of the hierarchy. In other words, the metric tensor g_{ij} is used to define and describe the geometric structure of \mathcal{M} , while the relationship between the two functions and the functor is used to capture the connectedness, orientability, and boundaries of the manifold.

$$\begin{aligned} & 1. \star \frac{\Delta \mathcal{H}}{\dot{A}i} \rightarrow \star \frac{\Delta \mathcal{H} + \gamma \Delta \mathcal{H}}{i \oplus \dot{A} + \dot{A}} \quad 2. \star \frac{\gamma \Delta \mathcal{H}}{i \oplus \dot{A}} \rightarrow \star \frac{\cong \Delta \mathcal{H} \gamma}{\dot{A} \oplus i} \quad 3. \star \frac{\cong \mathcal{H} \Delta}{\dot{A}i} \rightarrow \star \frac{\sim \mathcal{H} \Delta \cong}{i \oplus \dot{A}} \quad 4. \\ & \star \frac{\sim i \oplus \dot{A} \Delta}{\mathcal{H}} \rightarrow \star \frac{\heartsuit i \oplus \Delta \dot{A} \sim}{\mathcal{H}} \quad 5. \star \frac{\heartsuit i \oplus \Delta \dot{A}}{\sim \mathcal{H} \star \oplus} \rightarrow \star \frac{\Omega \Delta i \dot{A} \sim \heartsuit}{\mathcal{H} \star \oplus} \quad 6. \star \frac{\Omega \Delta i \dot{A} \sim}{\heartsuit \mathcal{H} \oplus} \rightarrow \star \frac{\oplus \cdot \Omega \Delta i \dot{A} \sim}{\heartsuit \mathcal{H}} \quad 7. \\ & \star \frac{\oplus \cdot i \Delta \dot{A}}{\mathcal{H} \star \heartsuit} \rightarrow \star \frac{\left| \star \mathcal{H} \Delta \dot{A} \oplus \cdot i \right|}{i \oplus \sim \cdot \heartsuit} \quad 8. \star \frac{\left| \star \mathcal{H} \Delta \dot{A} \right|}{i \oplus \sim \cdot \heartsuit} \rightarrow \star \frac{\left| \star \mathcal{H} \Delta \dot{A} \right| | i \oplus \sim \cdot \heartsuit |}{i \oplus \sim \cdot \heartsuit} \\ & 1. \star \frac{\Delta \mathcal{H} + \gamma \Delta \mathcal{H}}{i \oplus \dot{A} + \dot{A}} \rightarrow \frac{\gamma \Delta \mathcal{H}}{\dot{A}} \quad \text{if } \mathcal{H} \neq 0 \wedge \Delta \neq 0 \wedge \dot{A} \neq 0 \\ & 2. \star \frac{\cong \Delta \mathcal{H} \gamma}{\dot{A} \oplus i} \rightarrow \frac{\Delta \mathcal{H}}{\dot{A}} \quad \text{if } \gamma \neq 0 \wedge \mathcal{H} \neq 0 \wedge \dot{A} \neq 0 \wedge i \neq 0 \\ & 3. \star \frac{\sim \mathcal{H} \Delta \cong}{i \oplus \dot{A}} \rightarrow \frac{\mathcal{H} \Delta}{i} \quad \text{if } \Delta \neq 0 \wedge \mathcal{H} \neq 0 \wedge i \neq 0 \\ & 4. \star \frac{\heartsuit i \oplus \Delta \dot{A} \sim}{\mathcal{H}} \rightarrow \frac{\Delta \dot{A}}{\mathcal{H}} \quad \text{if } \mathcal{H} \neq 0 \wedge \dot{A} \neq 0 \wedge i \neq 0 \\ & 5. \star \frac{\Omega \Delta i \dot{A} \sim \heartsuit}{\mathcal{H} \star \oplus} \rightarrow \frac{\Omega \Delta i \dot{A} \sim}{\mathcal{H} \star} \quad \text{if } \Delta \neq 0 \wedge i, \dot{A}, \Omega \neq 0 \wedge \mathcal{H} \neq 0 \\ & 6. \star \frac{\oplus \cdot \Omega \Delta i \dot{A} \sim}{\heartsuit \mathcal{H}} \rightarrow \frac{\Omega \Delta i \dot{A} \sim}{\mathcal{H}} \quad \text{if } \mathcal{H} \neq 0 \wedge \Delta, i, \dot{A}, \Omega \neq 0 \\ & 7. \star \frac{\left| \star \mathcal{H} \Delta \dot{A} \oplus \cdot i \right|}{i \oplus \sim \cdot \heartsuit} \rightarrow \frac{\mathcal{H} \Delta \dot{A} \oplus \cdot}{i \oplus \sim \cdot} \quad \text{if } \mathcal{H} \neq 0 \wedge \Delta, i, \dot{A} \neq 0 \\ & 8. \star \frac{\left| \star \mathcal{H} \Delta \dot{A} \right|}{i \oplus \sim \cdot \heartsuit} \rightarrow \frac{\mathcal{H} \Delta \dot{A}}{i \oplus \sim \cdot \heartsuit} \quad \text{if } \mathcal{H} \neq 0 \wedge \Delta, i, \dot{A} \neq 0 \end{aligned}$$

Finally, the topological properties of \mathcal{M} can be analyzed with the equations

$$\int_{\Omega} dx \wedge f \Omega = \left| \star \int_{\Omega} dx \wedge \mathcal{H} \right|,$$

where Ω is a subset of \mathcal{M} , dx is an element of the manifold, and \mathcal{H} is a vector field on \mathcal{M} . The left-hand side of the equation describes the integration of the differential form $f\Omega$ over the domain Ω , while the right-hand side is the evaluation of \mathcal{H} on Ω by \star -integration. This allows us to determine the cohomology and homology groups of \mathcal{M} .

where $f \in R$ is an arbitrary real-valued function and \star is the Hodge dual mapping from the complexified domain of Ω to the extended domain.

$$\delta = \star \left[\int_{\Omega} dx \wedge f\Omega \right]$$

where δ is the coboundary operator on the manifold and $f\Omega$ is a differential form. The coboundary operator is used to measure the topological differences between two different submanifolds, Ω and $\tilde{\Omega}$, by evaluating the difference between the integrals of the differential form $f\Omega$. The coboundary operator is also used to compute the cohomology groups of Ω by taking the \star -cohomology of the differential form.

Additionally, $\mathcal{H} \in R$ is a vector field over \mathcal{M} and acts as a measure of the curvature of \mathcal{M} at a given point. \heartsuit

$$\mathcal{M} \cong \frac{\mu}{n \subset \kappa} \cdot \mathcal{L}_{[f(\langle \&r, \alpha s, \Delta, \eta \rangle) = [n] \&\mu]} \cdot \left(\int_{\Omega} dx \wedge f\Omega = \left| \star \int_{\Omega} dx \wedge \mathcal{H} \right| \right).$$

Then, I find that:

$$\mathcal{H} = \sum_{\mu \in A} \sum_{\nu \in B} \exp \left\{ \frac{\beta \nu \mu}{\alpha \Theta} \right\} (\gamma \tau \rho)^{\delta} \cdot \cos \left[\lambda \left(\frac{\zeta}{\eta} \right) \right] + e^{-(\xi + \iota)}.$$

is the form of a hyperbolic equation corresponding to the integral.

where $\star = \{\Lambda \quad if\Omega = \Lambda\Gamma \quad if\Omega = \Gamma, \quad f\Omega = \{f_{\Lambda} \quad if\Omega = \Lambda f_{\Gamma} \quad if\Omega = \Gamma$
 $::RE + \sum_{h=1}^M \phi_h(u) \psi_h(x)$

$$\int_{\Omega} dx dy F(\Omega) + \sum_{h=1}^M \phi_h(u) \psi_h(x)$$

The overarching pattern in the above content can be succinctly expressed as follows:

$$E = \Omega_{\Lambda} \cdot \tan \psi \diamond \theta + \Psi \star F$$

where

$$F = \diamond \left(\frac{\Delta}{\mathcal{H}} + \frac{\mathring{A}}{\mathring{i}} \right) \diamond \left(\frac{\Delta \mathcal{H}}{\mathring{A} \mathring{i}} \right) \diamond \left(\gamma \frac{\Delta \mathcal{H}}{\mathring{i} \oplus \mathring{A}} \right) \diamond \left(\cong \frac{\mathcal{H} \Delta}{\mathring{A} \mathring{i}} \right) \diamond \left(\sim \frac{\mathring{i} \oplus \mathring{A} \Delta}{\mathcal{H}} \right) \diamond \left(\frac{\heartsuit \mathring{i} \oplus \Delta \mathring{A}}{\sim \mathcal{H} \star \oplus} \right) \diamond \left(\Omega \frac{\Delta \mathring{i} \mathring{A} \sim}{\heartsuit \mathcal{H} \oplus} \right) \diamond$$

$$\left({}_t\mathcal{O}17.5\oplus \cdot i\Delta \mathring{A}\mathcal{H}\star \heartsuit \right) \diamond \left(\left| \frac{\star \mathcal{H}\Delta \mathring{A}}{i\oplus \sim \heartsuit} \right| \right).$$

This equation reveals the curvature of \mathcal{M} at a given point, allowing us to analyze the topology and geometry of the manifold. Additionally, this equation can be used to determine the relationships between the connectedness, orientability, and boundaries of \mathcal{M} in terms of the parameters μ and ν .

Alternatively, if this equation describes the curvature of \mathcal{M} at any given point. A and B are sets of real numbers, β and α are constants, Θ is the metric tensor, γ , τ , and ρ are vectors, δ is an exponent, λ and ζ are angles, η is a scalar, ξ is a scalar and ι is a constant.

By using this equation, we can calculate the specific curvatures of a given point in the manifold and use it to compare the curvature values of other points. This helps to better understand the general geometry of the manifold and to gain a better visual representation of its topology.

The rules for arranging and combining the quasi quanta can be written in mathematical notation as follows:

- \star (multiplication): $\bullet \oplus \longrightarrow \star \rightarrow \bullet \cdot \oplus$.
- \diamond (addition): $\bullet \oplus \longrightarrow \diamond \rightarrow \bullet \oplus \cdot$.
- \oplus (sequence): $\star \longrightarrow \oplus \rightarrow \bullet \star \cdot \oplus$.
- \heartsuit (reversed sequence): $\bullet \diamond \longrightarrow \heartsuit \rightarrow \star \bullet \cdot \oplus$.